

What is claimed is:

1. A light emitting device comprising:

a light emitting element which includes a transparent substrate and a stack of GaN-based compound semiconductor layers formed on a first surface of the transparent substrate; and

one of a lead frame and a printed circuit board on which said light emitting element is mounted so that said transparent substrate is located on a side of said stack of GaN-based compound semiconductor layers opposite to the one of the lead frame and the printed circuit board;

wherein a second surface of the transparent substrate opposite to said first surface contains a portion inclined with respect to the first surface.

2. A light emitting device according to claim 1, wherein said portion of the second surface of the transparent substrate includes one or more conical surfaces, one or more pyramidal surfaces, one or more hemispherical surfaces, one or more paraboloidal surfaces, or any combination thereof.

3. A light emitting device comprising:

a light emitting element which includes a transparent substrate and a stack of GaN-based compound semiconductor layers formed on a first surface of the transparent substrate;

an optical member which is arranged in contact with a second surface of the transparent substrate opposite

to said first surface, and has a surface being located on an opposite side to the transparent substrate and containing a portion inclined with respect to said first surface of the transparent substrate; and

5                   one of a lead frame and a printed circuit board on which said light emitting element is mounted so that the transparent substrate is located on a side of the stack of GaN-based compound semiconductor layers opposite to the one of the lead frame and the printed circuit board.

10                  4. A light emitting device according to claim 3, wherein said optical member has a function of a sealing package which seals said light emitting element.

15                  5. A light emitting device according to claim 3, wherein said portion of the surface of the optical member includes one or more conical surfaces, one or more pyramidal surfaces, one or more hemispherical surfaces, one or more paraboloidal surfaces, or any combination thereof.

20                  6. A light emitting device according to claim 4, wherein said portion of the surface of the optical member includes one or more conical surfaces, one or more pyramidal surfaces, one or more hemispherical surfaces, one or more paraboloidal surfaces, or any combination thereof.

25                  7. A process for producing a light emitting device, comprising the steps of:

(a) applying a resist to a first surface of a transparent substrate located opposite to a stack of

GaN-based compound semiconductor layers, where the stack of GaN-based compound semiconductor layers is formed on a second surface of the transparent substrate opposite to the first surface, and the stack of GaN-based compound semiconductor layers and the transparent substrate constitute a light emitting element;

(b) shaping said first surface of the transparent substrate by grayscale exposure and dry etching so that the first surface of the transparent substrate contains a portion inclined with respect to said second surface of the transparent substrate; and

(c) mounting said light emitting element on one of a lead frame and a printed circuit board so that the transparent substrate is located on a side of said stack of GaN-based compound semiconductor layers opposite to the one of the lead frame and the printed circuit board.